DECISION RECORD

Decision: It is my decision to authorize the issuance of a ten year grazing lease to Mr. James Jenkins for Allotment #64089. The lease will be for 2 AUs at 100% public land at 24 AUMs of active use.

The fundamentals of rangeland health are identified in 43 CFR §§4180.1 and pertain to watershed function, ecological processes, water quality and habitat for threatened and endangered species and other special status species. Based on the available data and professional judgement, the evaluation by this environmental assessment indicates that the conditions identified in the fundamentals of rangeland health exist on the allotment.

If you wish to protest this proposed decision in accordance with 43 CFR §§4160.2, you are allowed 15 days to do so in person or in writing to the authorized officer, after the receipt of this decision. In the absence of a protest, this proposed decision will become the final decision of the authorized officer without further notice, in accordance with 43 CFR 4160.3. Please be specific in your points of protest. A period of 30 days following receipt of the final decision, or 30 days after the date the proposed decision becomes final, is provided for filing an appeal and petition for the stay of the decision, for the purpose of a hearing before an Administrative Law Judge (43 CFR 4.470).

The appeal shall be filed with the office of the Field Office Manager, 2909 West Second, Roswell, NM, and must state clearly and concisely your specific points.

Signed by T. R. Kreager — 6/21/01
Assistant Field Manager-Resources — Date

ENVIRONMENTAL ASSESSMENT

for

Section 3

GRAZING AUTHORIZATION

on

ALLOTMENT 64089
(Includes Allotment 64088)

Township 15 South, Range 27 East
Sections 6 (portion) & Section 7 (portion)

EA-NM-060-00-044

January 2000

U.S. Department of the Interior
Bureau of Land Management
Roswell Field Office
Roswell, New Mexico

I. BACKGROUND

A. Introduction

When authorizing livestock grazing on public range, the Bureau of Land Management (BLM) has historically relied on a land use plan and environmental impact statement to comply with the National Environmental Policy Act (NEPA). A recent decision by the Interior Board of Land Appeals, however, affirmed that the BLM must conduct a site-specific NEPA analysis before issuing a permit or lease to authorize livestock grazing. This environmental assessment fulfills the NEPA requirement by providing the necessary site-specific analysis of the effects of issuing a new grazing lease.

Mr. James Jenkins currently holds a Section 15 grazing lease for Allotment 64088 and a separate Section 15 grazing lease for Allotment 64089. Each lease is comprised of a 40-acre isolated parcel of public land within the common ranch unit. It is proposed that Allotment 64088 be combined with Allotment 64089, and the environmental analysis conducted for the ranch unit.

B. Purpose And Need For The Proposed Action

The purpose of combining Allotment 64088 with Allotment 64089 and issuing a single grazing lease would be to reduce paperwork and authorize livestock grazing on public range on Allotment 64089. Allotment 64089 was selected because of the presence of riparian habitat along the Pecos River, elevating it's priority over Allotment 64088. The lease would be needed to specify the types and levels of use authorized, and the terms and conditions of the authorization pursuant to 43 CFR §§4130.3, 4130.3-1, and 4130.3-2.

C. Conformance With Land Use Planning

The proposed action conforms with the Roswell Approved Resource Management Plan (RMP) and Record of Decision (BLM 1997) as required by 43 CFR 1610.5-3.

D. Relationships to Statutes, Regulations, or Other Plans

The proposed action and alternative are consistent with the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1700 et seq.); the Taylor Grazing Act of 1934 (43 U.S.C. 315 et seq.), as amended; the Clean Water Act (33 U.S.C. 1251 et seq.), as amended; the Endangered Species Act (16 U.S.C. 1535 et seq.), as amended; the Public Rangelands Improvement Act of 1978 (43 U.S.C. 1901 et seq.); Executive Order 11988, Floodplain Management; and Executive Order 11990, Protection of Wetlands.

I. PROPOSED ACTION AND ALTERNATIVES

A. Proposed Action - Current Livestock Management (BLM Preferred Alternative)

The proposed action is to combine Allotment 64088 with Allotment 64089 and issue Mr. James Jenkins a ten-year lease to graze cattle on Allotment 64089. Leased use would be for two animal units (AU), yearlong at 100 percent federal range, which corresponds to 24

animal unit months (AUMs).[1] The BLM does not control overall livestock numbers on the allotment.

Under the Proposed Action, management of the allotment would continue under the terms and conditions of the current lease. No changes to livestock management or to existing range improvements would be required.

B. No Grazing Lease Alternative

Under this alternative a new grazing lease would not be issued for Allotment 64089. No grazing would be authorized on federal land on this allotment.

III. AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS

A. General Setting

Allotment 64089 is in Chaves County, six miles southeast of Hagerman. A portion of the allotment lies in the 100-year floodplain of the Pecos River, which flows north-to-south through a broad alluvial valley. The river generally follows the east boundary of the allotment. Elevations range from 3400 feet on the uplands in the northwest portion, to 3355 within the floodplain of the Pecos River. About 200 acres of private land within the allotment was once under cultivation. Adjacent lands east across the river has been heavily developed for agriculture.

The climate is semi-arid with normal temperatures ranging from 25°F to 95°F at Roswell (Owenby and Ezell 1992). Observed minimum and maximum temperatures were -29°F and 110°F, respectively. Annual precipitation has ranged from 4.35 inches to 32.90 inches, with the normal being 12.09 inches, primarily as rainfall (Kunkel 1984).

Allotment 64089 is considered a riparian allotment because an isolated 40-are parcel of public land along the east boundary includes a very small portion of the Pecos River and floodplain. Riparian (and wetland) areas are directly influenced by permanent free water, whether at the surface or in the subsurface. Compared to adjacent upland sites, the riparian area has a greater amount and diversity of vegetation. The diversity of plant species and availability of water makes riparian areas prime wildlife habitat.

Though the riparian areas along the river have tremendous resource values, they have been altered by the regulation of river flows by upstream reservoirs, especially Sumner Lake. Reservoir releases are controlled by the the Bureau of Reclamation, and are largely driven by irrigation demands. Management of allotment riparian areas by the BLM and the leasetee will be within the constraints imposed by the regulation of river flows.

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[1] For a cattle operation, an animal unit (AU) is defined as one cow with a nursing calf or its equivalent. An animal unit month (AUM) is the amount of forage needed to sustain that cow and calf for one month.

B. Affected Resources

The following resources or values are not present or would not be affected by the authorization of livestock grazing on Allotment 64089: Areas of Critical Environmental Concern, Cultural Resources, Native American Religious Concerns, Prime or Unique Farmland, Minority/Low Income Populations, Hazardous or Solid Wastes, Wild and Scenic Rivers, and Wilderness. Affected resources and the impacts resulting from livestock grazing are described below.

1. Livestock Management

Affected Environment

Because the allotment lies outside of the Roswell Grazing District, livestock grazing is authorized under Section 15 of the Taylor Grazing Act. The allotment contains only two small, isolated parcels of public rangeland, therefore, the BLM does not control livestock numbers on Allotment 64089. Instead, the BLM bills Mr. Jenkins for the amount of forage available on the public rangeland within the allotment. The allotment covers approximately 1,000 acres, including 80 acres of BLM land.

The allotment was placed in the "C" category (for "Custodial") upon completion of the Roswell Resource Area Management Framework Plan Amendment/Environmental Impact Statement (BLM 1984). A C-category allotment has: (1) no significant resource conflicts, (2) only a moderate potential for improvement in forage production, and (3) a range condition rating of 38 to 51, and an improving range trend.

Mr. Jenkins currently runs mother cows and heifers on Allotment 64089, maximum numbers may reach up to fifty head. Livestock are rotated among two private ranches. The allotment is grazed only part of the year, typically from April through October. After grazing on the allotment, livestock are moved to private land off the allotment.

Goldenrod grows on the allotment. It can be poisonous to livestock during the dormant season (i.e., frost to greenup). Turpentine bush was stated as being more of a problem.

The two public parcels of land are not fenced apart from the private lands. The public land tract that includes a portion of the Pecos River is on a lower river terrace and is not fenced apart from the private lands. An old fence runs along the west side of the river and separates the river from the open pasture. The second public parcel is located in the uplands.

The only developed livestock water on the allotment is a well with drinking trough on private land. Livestock also water at two sites along the river on private land.

Environmental Impacts

Under the Proposed Action, current livestock grazing management would continue on the allotment. Because grazing would be sustainable under current management, no impacts to the livestock operation would occur.

Under the No-Grazing Alternative, no livestock grazing would be authorized on BLM lands. If livestock grazing were to continue on adjacent privately owned lands, the BLM land would have to be fenced apart to prevent trespass on public lands (43 CFR 4140.1(b)(1)). The expense of fencing would be borne by the private landowner.

Cumulative impacts of the grazing and no grazing alternatives were analyzed in *Rangeland Reform '94 Draft Environmental Impact Statement (BLM and USDA Forest Service 1994)* and in the *Roswell Resource Area Draft RMP/EIS (BLM 1994)*. The no livestock grazing alternative was not selected in either document.

2. Vegetation

Affected Environment

Allotment 64089 is in the Riparian community type due to the small acreage straddling the Pecos river and floodplain. About one-quarter of the allotment is in the 100-year floodplain of the river, but the riparian area consists of a narrow band along the riverbank. The river channel is entrenched and slightly confined by the the valley. Banks are unstable and sloughing does occur, but this is likely due to entrenchment of the channel rather disturbance associated with land use activities. The bed is sand with a mixture of silt, and has a low gradient (0.1 percent). The riparian area along the river is dominated by a dense canopy of saltcedar with a sparse understory. Floodplain vegetation beyond the narrow riparian area, consists of sand dropseed, Russian thistle, kochia and other annual forbs.

The upland parcel is a mesquite grassland type located just above the floodplain. Grasses include burrograss, alkali sacaton, and sand dropseed. Mesquite are low stature and fairly dense. Fourwing saltbush and creostoebush are scattered in the area.

Environmental Impacts

Under the Proposed Action, vegetation would continue to be grazed and trampled by livestock, primarily those species preferred as forage. The current level of use, however, appears to be sustainable. Monitoring conducted in January 1991 and a site visit in February 2000 indicated that enough vegetative ground cover was present to provide forage, and still prevent wind or water erosion.

Under the No-Grazing Alternative, vegetation condition might improve somewhat. Grasses would increase initially, but plant vigor could decline from the lack of vegetation removal, making ground species rank.

The riparian area would not be grazed under either Alternative because livestock are fenced away from the river. Even without grazing, the entrenchment of the river channel and the dense thickets of saltcedar limit the extent of this riparian area.

3. Soils

Affected Environment

The *Soil Survey of Chaves County, New Mexico, Southern Part (USDA Soil Conservation Service 1980)* was used to describe and analyze the impacts to soils. Most of the allotment is in the Glendale-Pecos-Vinton soil association. The east half of the allotment, including the entire BLM parcel, is in the Vinton-Glendale association (VG). This soil mapping unit is common in the bottomlands along the river.

The VG soil formed in stratified alluvium on the Pecos floodplain. It is deep, well-drained, and occasionally flooded. Runoff is slow and the water erosion hazard is moderate. Textures of the soil range from loamy fine sand to fine sandy loam, so the wind erosion hazard can be severe.

Ecological site descriptions are the basis for the range trend analyses discussed in the Vegetation section of the EA. The BLM land on the allotment is included in a Salty Bottomland SD-3 and Loamy SD-3 ecological sites.

Environmental Impacts

Under the Proposed Action, livestock would remove some of the cover of standing vegetation and litter, and compact the soil by trampling. If livestock management is inadequate, these effects could be severe enough to reduce infiltration rates and increase runoff, leading to greater water erosion and soil losses (Moore et al. 1979, Stoddart et al. 1975).

Though livestock impacts are possible, monitoring data from 1991 and a field check in 2000 indicate that the current level of grazing is sustainable and should maintain an adequate vegetative cover to protect soils from erosion and compaction.

Under the No-Grazing Alternative, any risk of overgrazing would be eliminated. However, removing grazing animals from an area where they were a natural part of the landscape could result in poor use of precipitation and inefficient mineral cycling (Savory 1988). Bare soil could be sealed by raindrop impact, and vegetation could become decadent, inhibiting new growth. Therefore, the results of no grazing could be similar to those of overgrazing in some respects.

4. Water Quality

Affected Environment - Surface Water

The Pecos River flows for a total of approximately one mile along the northeast boundary of the allotment including 0.2 miles on BLM land. Allotment 64089 is on the river reach between the Rio Peñasco and Salt Creek, which is identified as Segment 2206 by the New Mexico Water Quality Control Commission (WQCC).

Under the authority of the federal Clean Water Act, the WQCC (1995) designated uses for streams in New Mexico. Designated uses for Segment 2206 include irrigation, livestock watering, wildlife habitat, secondary contact (e.g., wading), and a warmwater fishery.

The WQCC (1995) also established water quality standards to protect the designated uses, and directs periodic water quality assessments to ensure that standards are met. According to the New Mexico Environment Department (NMED), Segment 2206 is currently meeting the standards for all its designated uses (Hogge 1998, NMED 1998a).

Environmental Impacts - Surface Water

In general, livestock grazing is considered a potential cause of nonpoint source pollution, with sediment as the primary contaminant. Livestock grazing on the allotment, however, is not expected to be a significant cause of sediment loading to the Pecos River under any management alternative. The NMED conducted an intensive assessment of Pecos River water quality in 1997. They concluded that no water quality standards have been exceeded in the past ten years on Segment 2206 (NMED 1998a).

The NMED also considered siltation and stream bottom deposits in evaluating impacts to the threatened Pecos bluntnose shiner and its habitat. The NMED cites a letter from the U.S. Fish and Wildlife Service (USFWS) that sediment conditions alone are not significant contributing factors in the ability of the bluntnose shiner to survive and reproduce. Instead, upriver reservoirs have trapped sediment and resulted in water exiting the reservoirs that is "starved of sediment." Therefore, sediment loading due to livestock grazing on the allotment would not be expected to significantly affect Pecos River water quality under either alternative.

Cumulative impacts to Pecos River water quality from grazing on Allotment 64089 would not be expected to be significant. The intensive assessment of the Pecos River by the NMED also included Segment 2207 (Sumner Dam to Salt Creek) immediately upstream of Segment 2206. Besides rangelands, potential sources of pollutants in Segments 2206 and 2207 include irrigation return flows, dairies, municipal and industrial sources, mineral development, and road construction and maintenance. Even considering all these potential pollution sources, neither segment had a documented exceedance of any water quality standard.

Affected Environment - Ground Water

The allotment lies at the center of the Roswell Underground Water Basin (New Mexico State Engineer 1995). Ground water in the alluvial aquifer is less than ten feet deep on much of the allotment (Welder 1983; Wilkins and Garcia 1995). On the BLM parcel it is near the surface. Yields of 100 gallons per minute or more from the alluvium are common along parts of the river (Geohydrology Associates, Inc. 1978).

The concentration of chlorides in the ground water fluctuates annually. Generally, they are lowest in the spring, and highest in the fall following the irrigation season. Chloride concentrations are approximately 1000 milligrams per liter near the allotment (Welder 1983).

Environmental Impacts - Ground Water

Livestock grazing would not be expected to have a significant impact on ground-water quality under any management alternative. Livestock would be dispersed over the allotment, and the soil would filter potential contaminants.

The WQCC has the primary responsibility for ground-water quality management in New Mexico. In their most recent report on water quality in New Mexico, the WQCC (1996) did not find livestock grazing on rangelands to be an important potential source of contamination to ground water.

Wilson (1981) also discussed potential sources of ground-water contamination and the relative vulnerability of aquifers in New Mexico. He identified animal confinement facilities (e.g., dairies, feedlots) as potential sources of contamination elsewhere in New Mexico, including areas in the Pecos valley downstream from the allotment. Wilson did not, however, identify livestock grazing on rangelands as an important potential source of ground-water contamination.

Cumulative impacts to ground-water quality from grazing on Allotment 64089 would be negligible. Grazing impacts would be insignificant when compared to other potential sources of contamination, such as saline intrusion and agriculture.

5. Floodplains

Affected Environment

The properties of any stream or river are the result of the interaction of its channel geometry, streamflows, sediment load, channel materials, and valley characteristics (Rosgen 1996). The form and fluvial processes of the Pecos River have been modified by the construction of dams, which have drastically altered the streamflow and sediment regimes of the river. Flooding is less frequent and less severe than prior to dam construction, and sediment loads have been greatly reduced (see Figure 1). As a result, the channel has become entrenched, and exhibits much less lateral migration.

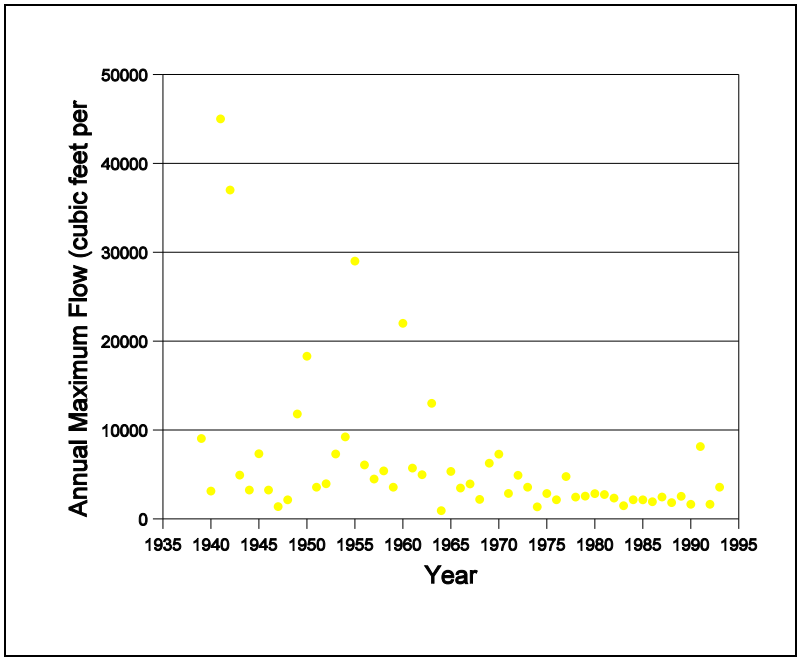

Figure 1. Annual maximum flow at USGS gage at Acme, New Mexico (08386000) for period 1939-1993 (Borland and Ong 1994). In the 25-year period 1939-1963, an annual maximum flow of 8000 cfs was exceeded nine times. In the 30-year period 1964-1993, 8000 cfs was exceeded only once (1991).

Flow regulation with the dams has also changed the extent, character, and condition of the riparian area on the river (Durkin et al. 1994). Seasonal flooding is required for obligate riparian vegetation, and sediment deposition on floodplains is important for riparian succession.

For administrative purposes, the 100-year floodplain provides the basis for floodplain management on public lands. It is based on maps prepared by the Federal Emergency Management Agency (1983). Of 1,000 total acres on the allotment, 573 acres are in the 100-year floodplain, including 78 acres of BLM land. There are no significant floodplain developments on the allotment.

Environmental Impacts

The primary influences on floodplain function on the allotment would continue to be the reduction in the frequency and magnitude of peak flows. Whether or not grazing is authorized on Allotment 64089 would have a negligible impact on floodplain function. The greatest impact would be expected under the No-Grazing Alternative if the 80 acres of BLM land were fenced apart from the private land to prevent trespass.

6. Wildlife

Affected Environment

The allotment provides a variety of habitat types for terrestrial and aquatic wildlife species. The diversity and abundance of wildlife species in the area is due to the presence of open water, the numerous drainages interconnecting upland habitats to the Pecos floodplain, a mixture of grassland habitat and mixed desert shrub vegetation, and riparian vegetation found within the floodplain of the river.

Common mammal species using the area include mule deer, coyote, gray fox, bobcat, striped skunk, porcupine, racoon, badger, jackrabbit, cottontail, white-footed mouse, deer mouse, grasshopper mouse, kangaroo rat, spotted ground squirrel, and woodrat.

Numerous avian species use the Pecos River during spring and fall migration, including migratory birds (e.g., ducks, geese, cranes, waterbirds) and nongame migratory birds. Common bird species are mourning dove, mockingbird, white-crowned sparrow, black-throated sparrow, blue grosbeak, northern oriole, western meadowlark, Crissal thrasher, western kingbird, northern flicker, common nighthawk, loggerhead shrike, and roadrunner. Raptors include northern harrier, Swainson's hawk, and American kestrel.

The Pecos River once supported a wide variety of native fish species adapted to the flow regime that existed prior to dam construction, agriculture development, and the introduction of non-native fish species. The greatest impact to fish habitat is the manipulation of water supply to meet irrigation needs. Representative fish species include the red shiner, sand shiner, Arkansas River shiner, Pecos bluntnose shiner, plains minnow, silvery minnow, plains killifish, mosquitofish, speckled chub, river carpsucker and channel catfish.

A variety of herptiles also occur in the area. Species include the yellow mud turtle, box turtle, eastern fence lizard, side-blotched lizard, horned lizard, whiptail, hognose snake, coachwhip, gopher snake, rattlesnake, and spadefoot toad.

Environmental Impacts

Under the Proposed Action, livestock grazing would not significantly affect wildlife habitat. Under the No-Grazing Alternative, wildlife habitat would improve somewhat. Livestock would no longer compete directly with wildlife for forage, browse, and cover. Improvement would continue to be limited by invasive species (e.g., goldenrod and kochia), which affect plant composition. New range improvement projects that could benefit wildlife habitat, such as saltcedar or goldenrod control, might not be implemented because these projects are primarily driven and funded through the range program.

7. Threatened and Endangered Species

The Pecos bluntnose shiner, Pecos gambusia and Pecos sunflower are federally listed species that occur or have the potential to occur on the allotment. Federally proposed species include the Pecos pupfish. The status and presence of these species in the RFO area are discussed in the following section.

Pecos Bluntnose Shiner *(Notropis simus pecosensis)* - Federal Threatened

Affected Environment

Historically, the Pecos bluntnose shiner inhabited the Pecos River from Santa Rosa to near Carlsbad, New Mexico. Currently, the subspecies is restricted to the river from the Fort Sumner area southward locally to the vicinity of Artesia, and seasonally in Brantley Reservoir (NMDGF 1988; USFWS 1992). Routine fish community monitoring conducted by the USFWS in the Pecos River between Sumner Dam and Brantley Reservoir show the fish remains generally abundant, especially in light of cooperative efforts between the Bureau of Reclamation and the USFWS to more closely mimic natural flows in the Pecos River.

There are two designated critical habitat areas on the Pecos River within the RFO area. The first is a 64-mile reach beginning about ten miles south of Fort Sumner, downstream to a point about twelve miles south of the DeBaca/Chaves county line. The second reach is from Highway 31 east of Hagerman, south to Highway 82 east of Artesia. Allotment 64072 lies 13 river miles north of the second reach.

The primary threat to the Pecos bluntnose shiner appears to be the manipulation of flows in the Pecos River to meet irrigation needs, and the subsequent drying of the river channel (Hatch et al. 1985). High flows in late winter-early spring before natural spring runoff appear to displace fish into marginal downstream habitats, including Brantley Reservoir. Cessation of reservoir releases after spring runoff and before the advent of summer rains desiccates long stretches of the Pecos River. Maintenance of water levels within the Pecos River and its tributaries is beyond the management authority of the BLM.

In addition to the manipulation of flows is the threat posed by non-native fish. The introduction and establishment of species such as the Arkansas River shiner offers direct competition with the Pecos bluntnose shiner.

Livestock grazing does not appear to be a threat to the bluntnose shiner based on a review of the literature. Nor was grazing identified in the Pecos Bluntnose Shiner Recovery Plan as having the potential to adversely affect water quality, and thus the bluntnose shiner (USFWS 1992).

Environmental Impacts

Under the Proposed Action, livestock grazing impacts to the Pecos bluntnose shiner would be negligible. Under Alternative B, no impacts from livestock grazing would occur. Based on the assessment of Pecos River water quality conducted by the NMED in 1997, it appears that the shiner would not be affected by poor water quality if a grazing lease were issued.

Section 303(d) of the federal Clean Water Act requires that the State identify those waters for which existing required pollution controls are not stringent enough to meet State water quality control standards. The State must then establish total maximum daily loads (TMDLs)

for pollutants of these water-quality-limited stream segments.[2] The presence of critical habitat for the threatened Pecos bluntnose shiner raised the Pecos River to a priority one on the New Mexico 303(d) ranking system.

Segment 2206 (Pecos River from Rio Peñasco to Salt Creek) had been listed for TMDL development because of concerns about stream bottom deposits, dissolved oxygen, total dissolved solids, metals, and un-ionized ammonia. Following a review of historical data and their survey, however, the NMED (1998a) concluded there was no basis for developing TMDLs on Segment 2206. The NMED (1998b) removed the segment of the Pecos River from the 1998-2000 303(d) list.

NMED's decision to remove Segment 2206 from the 303(d) list bears directly on the Biological Opinion rendered by the USFWS on the Roswell Resource Management Plan. The USFWS cited the New Mexico Water Quality Control Commision's 305(b) report in their opinion. The report identified siltation, reduction of riparian vegetation, and streambank destabilization as among the probable causes for the Pecos River in the RFO area not supporting its designated use as a warm water fishery, and identified rangeland agriculture as a probable source of the nonsupport. Just as Segment 2206 was removed from the 303(d), the next 305(b) report will no longer list the segment as water quality-limited (Hogge 1998).

Pecos Gambusia *(Gambusia nobilis)* - Federal Endangered

Affected Environment

The Pecos gambusia is endemic to the Pecos River Basin in southeastern New Mexico and western Texas. Historically, the species occurred as far north as the Pecos River near Fort Sumner, and south to Fort Stockton, Texas.

Recent records indicate, however, that its native range is restricted to sinkholes and springs and their outflows on the west side of the Pecos River in Chaves County. In spite of population declines, the species remains locally common in a few areas of suitable habitat. The BLNWR and the Salt Creek Wilderness Area contain the key habitat of the species in the RFO area. On the refuge, the gambusia is primarily restricted to springs and sinkholes in the Lake St. Francis Research Natural Area.

Endangerment factors include the loss or alteration of habitat (e.g., periodic dewatering) and introduction of exotic fish species (e.g., mosquitofish). Potential impacts to habitat may also occur from surface disturbing activities at sinkholes or springs and their outflows.

Environmental Impacts

No impacts to the Pecos gambusia would result from livestock grazing. No springs or seeps exist on BLM land within the allotment that would provide yearlong habitat for the gambusia.

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[2] The TMDL is defined as "the greatest loading or amount of the pollutant that may be introduced into a watercourse or stream reach from all sources without resulting in a violation of water quality standards."

Pecos (Puzzle) Sunflower *(Helianthus paradoxus)* - Federal Threatened

Affected Environment

The Pecos sunflower is found along alkaline seeps and cienegas of semi-desert grasslands and short-grass plains (4,000-7,500 ft.). Plant populations are found both in water and where the water table is near the ground surface.

In the RFO area, the sunflower is found in only a few areas outside of the BLNWR. In 1994, a new population was found growing on the margins of Lea Lake and its outflow at Bottomless Lakes State Park. Lloyd's Draw, east of the Pecos River, has the only known Pecos sunflower population on BLM land. It became evident at this location following a prescribed fire. Potential habitat also occurs on BLM land within the Overflow Wetlands Wildlife Habitat Area.

Potential habitat for the sunflower occurs on the allotment as low lying areas where the water table is near the ground surface. The low lying areas are not necessarily along the existing river channel, but in old channel courses and oxbows. These areas are now invaded by saltcedar growing in dense stands due to the availability of ground water. The areas appear to be potential wetland-type sites for Pecos sunflower if saltcedar was not present. No Pecos sunflower populations have been found on the allotment to date. Endangerment factors include dewatering of riparian or wetland areas where the sunflower is found, surface disturbing activities, and excessive livestock grazing.

Environmental Impacts

Impacts to the Pecos sunflower due to livestock grazing would be negligible under the Proposed Action. Impacts would not occur under Alternative B. The dominance of its potential habitat by saltcedar appears to be a major factor controlling the sunflower's abundance and distribution.

Pecos Pupfish *(Cyprinodon pecosensis)* - Federal Proposed

Affected Environment

The Pecos pupfish is found in a variety of habitats from saline springs and gypsum sinkholes to desert streams with highly fluctuating conditions. Pecos pupfish populations are most dense in gypsum sinkholes on BLNWR. The species apparently thrives in these saline waters that support few other fish species. It occasionally occupies fresher waters in the Pecos River, but is uncommon in such habitats. In the river, the pupfish is most often found in backwater areas and side pools that lack sunfish or other predators (NMDGF 1988; Sublette et al. 1990; NMDGF 1997). The pupfish also inhabits the Overflow Wetlands Wildlife Habitat Area adjacent to the Bottomless Lakes State Park.

Endangerment factors include habitat loss caused by groundwater pumping and channel alterations, hybridization and/or replacement by the sheepshead minnow, and predation by non-native fish species. Potential impacts to habitat may occur from surface disturbing

activities at or near springs or seeps. Other activities that severely impact habitat are not within the purview of the BLM, such as transportation and utilization of water associated with agricultural irrigation. Livestock grazing may impact springs or seeps but most of these sites have been protected with exclosures.

Environmental Impacts

Under the Proposed Action, livestock grazing impacts to the Pecos pupfish would be negligible. Under Alternative B, no impacts from livestock grazing would occur. Conclusions regarding riverine habitat are based on the same information used for the Pecos bluntnose shiner. Suitable sinkhole or spring habitat does not exist on the allotment.

8. Visual Resources Management

Affected Environment

The allotment is in a Class III area for visual resources management. In a Class III area, contrasts to the basic elements (e.g., form, line, color, or texture) caused by a management activity may be evident and begin to attract attention in the landscape. The changes, however, should remain subordinate in the existing landscape.

Environmental Impacts

The basic elements of the landscape would not change within the allotment under either management alternative. Potential impacts to visual resources would be analyzed and mitigated if new allotment management activities are proposed in the future.

9. Recreation

Affected Environment

Recreation on the BLM land on Allotment 64089 is limited because of restricted access and because the BLM land is a small, isolated parcel surrounded by private land. Jicarilla Road provides access to the allotment, but unsurfaced private roads provide the only access to the BLM parcel. There are no roads or trails on the BLM land.

The allotment provides habitat for numerous game species including mule deer and pheasant. Though it is small and isolated, the BLM land on the allotment is used for hunting since the leasetee has allowed bow-hunting of deer and pheasant hunting on his adjacent private land. Fishing on the river is also common.

Environmental Impacts

Under the Proposed Action, no direct negative impacts to recreational activities on public lands would occur. The leasetee has not had significant conflicts with hunters in the past, and they are not expected in the future. Vandalism has not been a significant problem on this allotment.

Choosing the No-Grazing Alternative could cause conflicts between ranching activities and recreational use of the public lands. The leasetee has allowed hunting access to his private land in the past. If a grazing lease were not issued, and the leasetee fenced his privately owned land from the public land, hunting opportunities would be severely reduced.

10. Significant Caves and Karst

Affected Environment

Allotment 64089 is in an area of medium potential for the occurrence of caves and karst. No caves or major karst features have been reported for the allotment, though a comprehensive inventory has not been completed.

Environmental Impacts

Because no caves or major karst features are known to exist on the allotment, impacts to these resources are not expected to be significant under either Alternative. It is possible that karst features exist on the allotment, but have not yet been discovered. If discovered in the future, protective measures could be required to mitigate adverse impacts to the feature. Fencing to exclude livestock might be prescribed to prevent soil erosion, vegetation trampling, and livestock effluent from reaching the feature. A separate environmental analysis would be prepared prior to implementing mitigation measures.

11. Air Quality

Affected Environment

The allotment is in a Class II area for the Prevention of Significant Deterioration of air quality as defined by the federal Clean Air Act. Class II areas allow a moderate amount of air quality degradation.

Air quality in the region is generally good, with winds averaging 10-16 miles per hour depending on the season. Peak velocities reach more than 50 miles per hour in the spring. These conditions rapidly disperse air pollutants in the region.

Environmental Impacts

Dust levels resulting from allotment management activities might be slightly higher under the Proposed Action than the No-Grazing Alternative. The cumulative impact on air quality from the allotment would be negligible compared to all pollution sources in the region.

IV. CUMULATIVE IMPACTS

A cumulative impact is defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7).

The analysis of cumulative impacts is driven by major resource issues. The action considered in this environmental assessment (EA) is the authorization of livestock grazing on Allotment 64089, and the major issues include:

(1)
threatened and endangered species associated with the Pecos River, primarily the Pecos bluntnose shiner,

(2)
Pecos River water quality, and

(3)
riparian/wetland habitat within the Pecos River floodplain.

The incremental impact of issuing a grazing lease on these resources must be analyzed in the context of impacts from other actions. Other BLM actions that could have impacts on the identified resources include: livestock authorization on other allotments along the Pecos River; oil and gas activities on the river floodplain and on the uplands; rights-of-way crossing the river; and recreation use, particularly off-highway vehicles.

All authorized activities which occur on BLM land can also take place on state and private lands. In addition, significant impacts could result from reservoir management and the manipulation of river flows, agriculture (e.g. dairies, crop production, and irrigation diversions and return flows), and other land use activities.

Many of the actions which could contribute to cumulative impacts have occurred over many years. Impacts from open-range livestock grazing in the last century are still being addressed today. Sumner Dam, the principal structure controlling river flows in this reach, was built in 1937. Major irrigation projects were begun in the 19th century, and oil and gas activities began in the early part of the 20th century. All these activities are still occurring today, and are expected to continue into the foreseeable future to some degree.

The Proposed Action would not add incrementally to the cumulative impacts to threatened and endangered species, Pecos River water quality, or riparian/wetland habitat within the Pecos River floodplain. The conclusion that impacts to these resources from grazing authorization would not be significant are discussed in detail in Section III of the EA.

V. MITIGATION MEASURES

Mitigation measures are actions which could be taken to avoid or reduce impacts likely to result from the Proposed Action or the No-Grazing Alternative. Based on this analysis, no mitigation measures are needed to address adverse impacts.

It is possible that unforeseen impacts to other resources could occur during the term of the lease. If adverse environmental impacts are observed, action would be taken to mitigate those impacts at that time.

VI. RESIDUAL IMPACTS

Residual impacts are direct, indirect, or cumulative impacts that would remain after applying mitigation measures. No residual impacts following authorization of livestock grazing would be expected.

VII. FUNDAMENTALS OF RANGELAND HEALTH

Through the Rangeland Reform '94 initiative, the BLM developed new regulations for grazing administration on public lands. With public involvement, fundamentals of rangeland health were established and written into the new regulations. The fundamentals of rangeland health are identified in 43 CFR §4180.1, and pertain to (1) watershed function; (2) ecological processes; (3) water quality; and (4) habitat for threatened, endangered, and other special status species. Based on available data and professional judgement, the evaluation by this environmental assessment indicates that conditions identified in the fundamentals of rangeland health exist on Allotment 64072.

VIII. BLM INTERDISCIPLINARY TEAM

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Jerry Dutchover
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IX. PERSONS OR AGENCIES CONSULTED

Chaves County Public Land Use Advisory Committee
Mr. James Jenkins - Leasee
New Mexico Department of Game and Fish
New Mexico Energy, Minerals, and Natural Resources Department
- Forestry and Resource Conservation Division
New Mexico Environment Department - Surface Water Quality Bureau
New Mexico State Land Office
U.S. Fish and Wildlife Service - Ecological Services
U.S. Fish and Wildlife Service - Fishery Resources Office

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FINDING OF NO SIGNIFICANT IMPACT AND RATIONALE

EA No. NM-060-00-044

Finding of No Significant Impact:

I have reviewed this environmental assessment for Allotments 64088 and 64089, including the explanation and resolution of any potentially significant environmental impacts. I have determined that the proposed action and alternatives will not have significant impacts on the human environment, and that preparation of an Environmental Impact Statement (EIS) is not required.

Rationale for Recommendations:

The proposed action and alternatives would not result in any undue or unnecessary environmental degradation. The proposed action will be in compliance with the Roswell Approved Resource Management Plan and Record of Decision (October 1997).

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T.R. Kreager
Date
Assistant Field Office Manager - Resources